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Supreme Court of the United States

October Term, 1933

No. 511

ELECTRIC CABLE JOINT COMPANY

Petitioner

v.

BROOKLYN EDISON COMPANY, INC.

Respondent

PETITION FOR CERTIORARI AND BRIEF IN SUPPORT THEREOF

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PETITION FOR CERTIORARI

Your petitioner, Electric Cable Joint Company, respectfully prays for a Writ of Certiorari to the United States Circuit Court of Appeals for the Second Circuit, to review a judgment in that Court entered September 28, 1933. A transcript of the record in the case, including the proceedings in said Circuit Court of Appeals, is furnished herewith in accordance with Rule 38 of this Court.

Summary and Short Statement of the Matter Involved

The case is for infringement of a patent, now expired, and the sole question involved is the validity of the patent on which there is conflict between different circuits.

In the decision of the Circuit Court for the Second Circuit, to which this petiton for certorari is directed, the

patent was held invalid by a divided court, whereas it was previously held valid by a unanimous decision of the Circuit Court of Appeals for the Sixth Circuit (R. pp. 471-482).

The question involved in the present petition is which of these conflicting opinions on the validity of the patent should prevail.

Nature of the Suit and the Decisions of the District Court and the Circuit Court of Appeals

This suit is brought for infringement of claim 4 of United States Patent No. 1,172,322 (R. pp. 352-355). This claim was held void by the Honorable ROBERT A. INCH (Opinion, R. pp. 855-864). A decree was duly entered invalidating this claim of the patent.

On appeal, the decree of the District Court was affirmed by the Honorable AUGUSTUS N. HAND and Honorable THOMAS W. SWAN of the Circuit Court of Appeals (R. pp. 907, 908, 909, 910, 911). A dissenting opinion was filed by the Honorable MARTIN T. MANTON (R. pp. 912, 913). The final decree on the mandate of the Circuit Court of Appeals was entered on October 24, 1933.

The Subject-matter of the Suit

The patent in suit relates to joints for high tension electric cables, that is, for cables carrying electric current at high voltage. The current is carried in a conductor comprising a wire, or a number of wires, enclosed in a lead sheath and insulated from contact with the sheath by layers of paper, wrapped about the conductor and impregnated or saturated with an insulating fluid such as an oil. Commonly three conductors are enclosed in a

single sheath and these conductors are individually wrapped with oil saturated paper wrappings so as to be insulated from each other as well as from the sheath. Lengths of cable of this construction are made at the factory and then joined end to end so as to preserve the continuity of the conductors, of the wrapping and of the sheath.

The effectiveness of the paper wrapping insulation depends on maintaining it saturated and filled with the insulating compounds (R. pp. 61-64). Electric cables, when in use, are subject to fluctuations in temperature, the temperature rising when the quantity of current passing through the conductor increases and falling as the current decreases and, as the temperature rises, the insulating fluid expands and is exuded from the cable wrapping and, when the cable cools, it is reabsorbed (R. pp. 66-82). But if it does not all succeed in returning completely to its place, voids are formed, particularly in or near the joint, through which the current may strike from conductor to sheath and destroy the cable. The patentee found that the usual insulating compounds of the cable, for example paraffin, permitted the formation of voids due to the contraction and hardening on cooling and thus permitted a breaking down of the insulation after having been joined in continuous lengths and placed in use (R. p. 353, ll. 62-64).

The patentee solved this problem by impregnating the paper wrapping with a fluid that would flow freely at the temperatures of the cable and insuring against a deficiency through loss or displacement by providing at each cable joint a reservoir of fluid free to flow into the cable and in sufficient excess to make up losses or deficiencies (R. p. 64).

The single claim in issue is as follows:

> "4. An electric cable comprising a sheath, a line conductor having a joint, a body of pervious insulating material inclosing said joint, the said sheath being removed for a distance sufficient to expose said pervious body, a sleeve of impervious material of greater diameter than said body, inclosing the same and hermetically united at its ends to said cable sheath, a receptacle communicating with the interior of said sleeve, and an insulating fluid adapted to permeate said pervious body contained in said receptacle and the space between said body and said sleeve.

A disclaimer was made, prior to the suits in the Sixth and Second Circuits, as follows:

> "1,172,382.—Philip Torchio, New York, N. Y. Protective Device for Electric-Cable Joints. Patent dated February 22, 1916. Disclaimer filed February 11, 1927, by the assignee, Thomas E. Murray.
>
> "Hereby makes disclaimer of the improvement described except for electric cables which comprise a line conductor, insulating wrapping permeated with insulating compound and a sheath of flexible inelastic metal constituting a unitary product of manufacture and commerce which is portable and cable of being drawn through conduits; and except as to an insulating liquid which is fluid at ordinary working temperatures of such cables and in quantity sufficent to supply at all times the demands made by the cable in use, and by the joint."

The conflict in the decisions is solely on the validity of the patent. The Court of Appeals in the Second Circuit reached its conclusion on the strength of certain references in the prior art not before the Court in the Sixth

Circuit but which, as pointed out in the accompanying brief and in the dissenting opinion, do not disclose that particular feature on which the Court of Appeals in the Sixth Circuit sustained the validity of the patent.

The Reasons Relied on for the Granting of a Writ of Certiorari

A. The decision of the Circuit Court of Appeals for the Second Circuit is in conflict with the decision of the Circuit Court of Appeals for the Sixth Circuit in the same matter, and a decision of this Court is required to secure uniformity in decisions between the Circuit Courts of Appeals.

B. The Circuit Court of Appeals for the Second Circuit has decided the question of the validity of the patent in a way which is in conflict with the applicable decisions and precedents of this Court.

WHEREFORE, your petitioner respectfully prays that a Writ of Certiorari be issued under the seal of this Court and directed to the United States Circuit Court of Appeals for the Second Circuit, commanding said Court to certify and send to this Court, on a day to be designated, a full and complete transcript of the record and of all proceedings in said Circuit Court of Appeals had in this cause, to the end that this cause may be reviewed and determined by this Court, that the judgment of said Circuit Court of Appeals be reversed and that such other and further relief be granted as may be deemed proper.

Dated, November 20, 1933.

ELECTRIC CABLE JOINT COMPANY,
Petitioner.

By D. ANTHONY USINA,
Counsel.

Supreme Court of the United States

October Term, 1933

No. .....

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Respondent.

BRIEF FOR PETITIONER IN SUPPORT OF APPLICATION FOR WRIT OF CERTIORARI

The Opinions of the Courts Below

Reference is respectfully made to page 2 of the petition.

Jurisdiction

The grounds for jurisdiction are as follows:

1. The final decree to be reviewed was based on the opinion of the Circuit Court of Appeals dated and entered September 28, 1933.

2. The judgment was rendered in a suit in equity brought under the patent statutes to determine the validity and infringement of certain Letters Patent.

3. The statute under which jurisdiction is invoked is U. S. Code Title 28, Sec. 347, as amended.

Cases sustaining the jurisdiction when there are conflicting decisions as to the validity of a patent are:

Magnum Import Co. v. *Coty*, 262 U. S. 159, 163;
Powers-Kennedy Contracting Corp. v. *Concrete Mixing & Conveyor Co.*, 282 U. S. 175, 177-178;
Saranac Automatic Machine Corp. v. *Wire Bound Patents Co.*, 282 U. S. 704, 705;
Smith v. *Magic City Kennel Club*, 282 U. S. 784, 785.

Statement of the Case

Reference is respectfully made to pages 2, 3 and 4 of the petition for a general statement of the nature of the patent in suit and of the single claim in issue.

A specific embodiment of the invention is shown in Figs. 1 and 2 of the patent (R. p. 352) as applied to cables having conductors 1, 2 and 3, having an insulation of wrapped impregnated paper 4 and an enclosing lead sheath 7. In joining two lengths of cable according to the invention, the lead sheath 7 and the insulating wrappings are cut back a sufficient distance from the abutting ends of the cables to be joined to permit the conductors 1, 2 and 3 of one cable to be joined to those of the other. The exposed portions of the cables are then rewrapped with a pervious wrapping 5 and the ends of the sheaths 7 are hermetically joined to a connecting sleeve 8 having a receptacle or reservoir 10 communicating therewith and filled with insulating fluid. A wire gauze 13 secured by tape or twine 14 is provided within the sleeve and extends into contact with the sheaths 7.

The infringing device (R. pp. 77-79, 86, 515) is substantially the same as in the patent and consists, as shown

on page 515, of conductors 1, 2 and 3 and having impregnating wrappings 4 and lead sheaths 6 cut back from the ends of the conductors to be joined, the ends of the conductors then being joined by copper sleeves 9, again covered with wrappings 12 and the cut away part of the sheath replaced by a sleeve 19 which is hermetically sealed at its opposite ends to the sleeve. The interior of the sleeve is filled with oil and communicates with an expansible reservoir 17, or several cable sleeves may be in communication with a common reservoir as shown on page 516. This infringing device has the reservoir or receptacle and all of the other elements of the combination defined in claim 4 to which reference is made on page 4 of the petition.

In the opinion of the Circuit Court of Appeals for the Sixth Circuit the Court found (R. pp. 475, 476) that the patentee discovered a previously unsuspected cause for the breakdown of the joint insulation and a simple preventative; that he discovered that the cable "breathed" or "sucked," that is, that while in use the heat expanded it and that it correspondingly contracted while cooling; that this bleeding and expansion of the cable forced the insulating compound from the interstices of the pervious insulating wrappings and fillings, permitting dielectric loss and structural damage; that the problem was to restore this lost insulation, and that the teaching theretofore had been that the insulating compound in the joint should not be soft enough to flow and should not be permitted to escape. Then the Court concluded that the patentee substituted a liquid insulating compound for the compound with a low melting point theretofore in use in the cable sleeve; that this liquid compound would and did flow along the cable length between the conductors and the lead

sheath and refilled the empty cells of the pervious insulation; that this was new and useful and was a commercial success and that it was beyond the skill of an expert and amounted to patentable invention. The Court found that the invention was not anticipated by the prior art.

As an example of the art considered by this Court, the British patent to Watson 29,756 (R. pp. 455, 458-464) is the most pertinent, although it was too late in point of time to be an anticipation. This patent shows (R. p. 463) in Figs. 1 and 2, cables having conductors *b* first wrapped with twine spacers *a* wrapped helically, then with paper wrappings *c* and with a lead sheath *e*. Lengths of these cables were then joined, as indicated on page 464, in joint boxes *f* and oil was forced into these conductors and maintained under pressure by means of a plunger 8. Air chambers *i* were also provided, these air chambers being filled with oil which was then forced into the cable. As to this patent the Circuit Court for the Sixth Circuit held that it did not disclose a joint construction or joint insulation, or teach the method of uniting the joint box or sleeve with the cable and, therefore, would not anticipate the invention even if it were early enough in point of time. This Circuit Court in its opinion recognized (R. p. 476) that the cable, insulating compound, the sleeve with its soldered joint and possibly the cable joint construction, were all old but they were not old in combination, and that the new combination produced a new result.

The Circuit Court in the Second Circuit considered additional art, but this additional art did not contain any disclosures essentially different from those of the art considered in the Sixth Circuit. The additional art is as follows:

British patent to Geipel 11,280 of 1894 (R. p. 724) which merely shows conductors brought into a box, bared

of insulation, joined and the box filled with oil, wax or bitumen. It is substantially the same as the patent to Abel 11,932 (R. pp. 434-438) discussed in the decision in the Sixth Circuit (R. p. 477).

United States patent to Lemp No. 534,802 of 1895 (R. p. 730) which shows a transformer or induction coil comprising a hollow endless or torus shaped tube A forming the secondary of the transformer and enclosing a primary coil F and filled with a heavy cylinder oil from a reservoir J. It is not in any sense a cable or cable joint.

A Dutch article by deGelder on the cable system of Antwerp, 1907 (R. p. 734), which discusses the use of liquid impregnation in joints and the dangers in the drying out of the joint insulation when the liquid flows. deGelder stated (R. p. 749) that when fluid insulation is used the cable ends dry out and no longer resist breakdown and that this is due to temperature rise in the free cable ends; that this takes place at as low a temperature as 50 to 60° C., and that the cable should be limited to a maximum fluctuation in temperature of 25° C. He does not discuss nor disclose any means for replacing oil or maintaining oil in the cable joints when a fluid oil is used and the cable is subjected to such use as to cause fluctuations in temperature. At most deGelder discloses the use of oil, which was disclosed in the Watson patent (considered in the Second Circuit), and his use of oil is not any closer to that of the present invention than that of Watson.

An article by Vernier in the Journal of Institution of Electrical Engineers, 1911 (R. pp. 759-837) discusses cables and joints, showing on page 773, Fig. 12, a joint in which the joined ends of the conductors are wrapped. The author states (R. p. 774) that when oil is used the leakage is very small and breakdown does *not* occur from

this cause and he therefore advocates oil as a filling medium but does not disclose a reservoir to make up for deficiencies. If there is no leakage from the joint, such reservoir would not be necessary.

The Court in the Second Circuit concluded from the fact that the Vernier article advocated the use of oil that the author understood the breathing of the cable and that the addition of a reservoir or receptacle would be obvious, entirely overlooking the fact that oil was advocated because, in the author's opinion, it would not leak into the cable itself.

In one of the sub-stations of the Consolidated Gas Company in Baltimore, certain terminals or "pot heads" were filled with oil. In this construction the cable was brought from an underground duct upwards and connected to a busbar. The lead sheath and insulating material were removed from a considerable length at the top and the end of the sheath belled as at *c* (R. p. 615). The cut-off point was about 40 feet from the bottom, the conductors and insulation passing upwardly through the open end of this belled construction. It was then noticed that some of these terminals or pot heads started to dry out and additional impregnating oil of the type used in the cables themselves was poured in to replace the loss. This had nothing to do with the cable joints as is evident from the fact (R. p. 127) that the Company refused to fill the joint sleeves with oil and continued to fill them with paraffin (R. p. 127).

It is thus evident that all that these additional references disclosed was the idea of oil as an insulating liquid in cables and joints—a feature that was before the Court in the Sixth Circuit, as evidenced by the Watson patent. The Court in the Second Circuit concluded, however, that the use of oil as in the Baltimore pot heads, demonstrated

practically everything peculiar to the patentee's invention (R. p. 910) "with the exception of the receptacle for surplus fluid," which was not only shown in other devices (that is, other than cable joints) and "was an obvious addition if a supply of oil greater than the sleeve would hold were desired" (R. p. 911); whereas, in the Sixth Circuit the Court appreciated that until the patentee discovered the phenomenon and effects of breathing, the desirability of this reservoir or receptacle was not apparent nor obvious. The dissenting opinion in the Second Circuit agrees with the unanimous opinion in the Sixth Circuit.

Summary of Argument

1. Not only is there a diversity of the decisions in the several Circuits, but this diversity arises from a diversity of conclusions based upon essentially the same or similar facts.

2. The decision in the Second Circuit, which ignores a definite element of the combination defined in the claim and its cooperative relation to other elements and which draws conclusions from the references not in agreement with all of the statements of said references, is in conflict with the weight of the decisions and precedents of this Court.

ARGUMENT

There is Conflict Between the Circuits

From the statement of the case above, it is submitted that the additional art considered by the Court in the

Second Circuit did not disclose anything over the art considered in the Sixth Circuit and that, therefore, not only have decisions been rendered in two Circuits that are in direct conflict, but that this conflict does not arise from a different state of facts or different art, but solely from different reasoning on substantially the same facts.

The dissenting opinion supports this proposition, for it arrives at the same conclusions as those of the Court in the Sixth Circuit and states (R. p. 912):

> "An examination of the prior art convinces me that he [the patentee] was the first to discover the so-called breathing of the cable which would suck in the oil, thus filling the crevices or voids. The Circuit Court of Appeals for the Sixth Circuit * * * sustained this patent."

The basis for the decision in the Second Circuit Court of Appeals is not in accordance with the weight of decisions and precedents in this Court.

The dissenting opinion concisely sets forth the invention as follows (R. p. 912):

> "The prior art, referred to in the prevailing opinion, does not disclose this invention. The problem was to restore the lost insulation. Prior to the patent in suit, the teaching had been that the insulating compound in the joint should not be soft enough to flow. The thought was that the compound should not be permitted to escape and leave the joint unprotected. The patentee substituted a liquid insulating compound for the compound with a low melting point theretofore in use with the cable sleeve. The liquid compound would and did, especially under pressure, flow on the cable length."

Continuing, the dissenting opinion states with reference to the principal reference, Vernier:

> "The insulating schemes referred to by the Vernier patents, dealing in prophecy, have no description of an actual joint in service. Vernier does refer to insulating oil, solid compound and viscous compound. He says that there should be very little leakage of oil up the cores and that such leakage should be absolutely prevented. He did not have the conception of the migration of oil caused by the breathing of the cable and his remedy was to prevent leakage and not to provide oil in quantities sufficient to compensate for it. His recommendation was for a viscous compound and the important thing about this was its opposition to mobility. In his patents the outer joint box did not have a reservoir, while the patent in suit does and has a sufficent quantity of oil [to suppiy] at all times, the demands by the cable and joint by the breathing operation."

As against this is the statement in the prevailing opinion which ignores the lack of the receptacle and the fact that Vernier did *not* intend his oil to flow and, therefore, could not foresee the use of a receptacle and simply takes this element and adds it to Vernier from the totally unrelated patent to Lemp.

The dissenting opinion corresponds to the prevailing authorities in this Court:

In *Coffin* v. *Ogden*, 18 Wallace 120, the Court stated:

> "The invention or discovery relied upon as a defense, must have been complete, and capable of producing the result sought to be accomplished; * * * if the thing were embryotic or inchoate, if

> it rested in speculation or experiment; if the process pursued for its development had failed to reach the point of consummation, it cannot avail to defeat a patent founded upon a discovery or invention which was completed."

Also cited in *Washburn & Moen Mfg. Co.* v. *Beat 'Em All Barbed Wire Co.*, 143 U. S. 275, 285.

And, as stated in *Seabury & Johnson* v. *Amende*, 152 U. S. 561, 568:

> "This evidence does not disclose that any one prior to Amende accomplished what he has described and claimed; that the fact that others had done something quite similar and had used separately, or in different combinations, the ingredients of his claim, should not affect his patent. All that is described in the prior publications the defendant may use with perfect immunity."

So also in the present case, the defendant may use the disclosures of Vernier and the other references without infringing the claim of the patent in suit.

It is significant also that of the six Circuit Judges in the two Circuits, four have decided in favor of the patent and against the prevailing decision in the Second Circuit.

It is submitted that the Writ of Certiorari should be granted.

Respectfully submitted,

D. Anthony Usina,
Counsel for Petitioner.

Dated, November 20, 1933.